

21-27

Additional Dead Load
on Bridge Decks

May 31, 1968

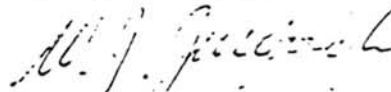
MEMO TO DESIGNERS:

The Bridge Department is often requested by the Districts to comment on the feasibility of overlaying existing structures with asphalt concrete, lightweight concrete, and/or other fill materials to meet new transverse or longitudinal grade requirements. When reviewing proposals to place additional dead load on bridge decks, use the following procedure.

1. Verify the thickness of existing overlay, if any.
2. Investigate for heavy utilities either existing or under consideration that would add to dead load.
3. Check the stress increase caused by the additional dead load. If the stresses using current HS20-44 and alternative loading are not more than 10% over current allowable values, they can be considered satisfactory. If the structure is more severely overstressed, the stresses should be reviewed by Bridge Maintenance using their permit overload criteria. The structure may have to be reinforced if paving is permitted.
4. Look at the effect that paving will have on the curbs, railings, drainage and expansion joints. These considerations may make extensive modification of the structure necessary.
5. Review paving proposals with Bridge Maintenance. There may be peculiarities about a particular bridge which will influence the decision to pave over it. Maintenance should concur with the recommendations which are made to the District.

For the design of new structures, no special provision will be made for future paving, except on structures where it is specifically anticipated.


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